

A NEW SPECIES OF *ENDAPHIS* (DIPTERA: CECIDOMYIIDAE)
ENDOPARASITIC IN APHIDS IN BRITISH COLUMBIA

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Abstract.—*Endaphis gregaria*, new species, is described, illustrated, and compared to its nearest relatives. Its larvae are gregarious endoparasites of aphids on red alder in British Columbia. Although endoparasitic cecidomyiids are widely distributed, *E. gregaria* is the first species recorded from North America.

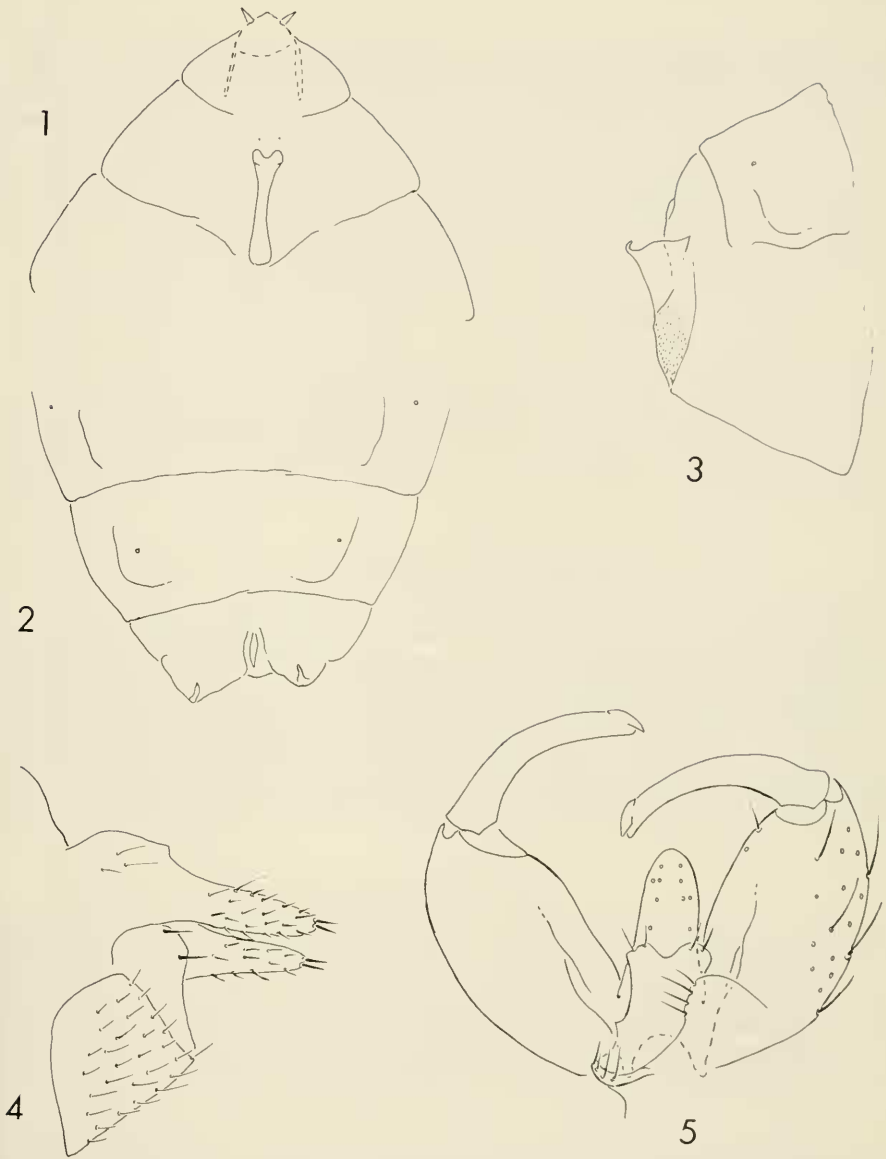
A new species of *Endaphis* is described to provide a name for the first endoparasitic cecidomyiid of aphids recorded from North America. Mackauer and Foottit (1979) reported on the bionomics of this species (as *Endaphis* sp.) on *Euceraphis gillettei* (Davidson) (Homoptera: Aphididae) on red alder, *Alnus rubra* Bong., in British Columbia.

The genus *Endaphis* is otherwise known from one European species, *Endaphis perfida* Kieffer, but the genus is similar in many respects to *Endopsylla*, *Pseudendaphis*, and *Occuloxenium*, which together include five species that are endoparasitic in aphids, tingids, or psyllids in Europe, Ghana, and Trinidad. *Endaphis* species are separated from those of the other three genera by the bifilar flagellomeres of the male antennae and the more simplified larvae with diminutive spiracles, reduced papillae, and cone-shaped caudal extensions. Mackauer and Foottit (1979) summarized the scant biological information available on the related species.

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Endaphis gregaria Gagné, NEW SPECIES

Adult.—Eyes 7-8 facets long across vertex; eye facets circular, slightly less close together on lateral parts of eyes than elsewhere. Occipital peak very short, but the 2 associated large setal bases evident. Flagellomeres of



Figs. 1-5. *Endaphis gragaria*. 1-3, Larva. 1, Anterior segments (ventral view). 2, Posterior segments (dorsal). 3, Same (lateral). 4, Female posterior segments (ventrolateral). 5, Male terminalia (dorsal).

♂ antenna binodal, bifilar; circumfilar loops short, not reaching base of next distal node. Flagellomeres of ♀ antenna with neck about $\frac{1}{3}$ length node. Palpus 4-segmented. Wing length: ♂, 1.4 mm; ♀, 1.5 mm. Anepimeron bare; anepisternum with 7–8 setae; mesoscutum uniformly covered with scales, setae of dorsocentral rows sparse, in single file. Claws simple, sharply curved beyond midlength, as long as empodia. Abdominal terga short, about as long as distance between them; sterna about $2\frac{1}{2}\times$ as wide as long; male terminalia as in Fig. 5; female terminalia as in Fig. 4.

Larva (Figs. 1–3).—Head wide with long caudolateral apodemes and long, pointed antenna. Spatula clove-shaped. Papillae evident (at 600 \times) only on venter of thorax. Integument smooth except for spinules covering venter of terminal segment. Anus dorsal. Terminal segment with 2 short, cone-shaped, caudal extensions, each with dorsally recurved point.

Types.—Holotype ♂, reared from *Euceraphis gillettei* on *Ahus rubra*, Burnaby, British Columbia, 27 July 1973, M. Mackauer, in U.S. National Museum, Washington, D.C. Paratypes, 2 ♂, 3 ♀, 3 larvae, same essential data as holotype; 4 larvae, from same host, Shannon Falls, B.C., 26 August, 1973; 1 ♂ and 1 ♀ paratype will be deposited in the Canadian National Collection, Ottawa, the remainder in the U.S. National Museum.

Discussion.—*Endaphis gregaria* differs from the European *E. perfida* in the shape of the terminalia which, in *gregaria*, have a divided sternum 10 and a much larger aedeagus than that drawn in Harris (1966) for *perfida*. The larva of *gregaria* differs from that of *perfida* as shown in Mamaev and Krivosheina (1965) in that abdominal papillae are not apparent in *gregaria*. The specific name, *gregaria*, was chosen because several larvae may occur within the hemocoel of an individual aphid.

LITERATURE CITED

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